

Remarks

Reconsideration of this Application is respectfully requested.

Claims 1, 2, 4-7, 9-15, 17-22 and 24-27 are pending in the application, with claims 1, 6, 14 and 21 being the independent claims. Claims 3, 8, 16 and 23 were previously cancelled.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 1, 4-6, 9, 10, 12-14, 17-21 and 24-27

The Examiner has rejected claims 1, 4-6, 9, 10, 12-14, 17-21 and 24-27 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,438,123 to Chapman (“Chapman”) in view of U.S. Patent No. 6,986,157 to Fijolek *et al.* (“Fijolek”). For the reasons set forth below, Applicants respectfully traverse.

Independent claim 1 recites, among other features, a media access control (MAC) in a cable modem that is adapted to format data for transmission to a cable modem termination system (CMTS) in accordance with either “a selected one of [a] plurality of protocol-specific header suppression techniques” or “a default header suppression technique”

In the Response to Applicants' arguments, the Examiner refers to Chapman as allegedly teaching the above recited features of claim 1. *See* Office Action at pages 2-3. However, on page 5 of the present Office Action, the Examiner contradicts this argument

and concedes that Chapman fails to teach the above recited features of claim 1, specifically, “a selected one of [a] plurality of protocol-specific header suppression techniques.” Although there is an apparent contradiction in the present Office Action, Applicants will respond to each argument.

In the Response to Applicants' arguments, the Examiner refers to Chapman as allegedly teaching the aforementioned features of claim 1. Chapman is directed to a DOCSIS-based cable modem network that allows only a single type of header suppression. Specifically, Chapman discloses the DOCSIS Header Suppression protocol. *See* Chapman, column 6, lines 14-20. However, the Examiner has cited to text in Chapman at column 5, line 63 through column 6, line 20 as allegedly teaching a cable modem network that formats data "according to plural header suppression protocols, namely, Ethernet, UDP, IP, and RTP." *See* Office Action at pages 2-3. Applicants respectfully disagree with the Examiner. The plurality of header suppression protocols the Examiner refers to (Ethernet, UDP, IP, and RTP) are not header suppression protocols. Rather, they are networking protocols that contain headers which are subsequently suppressed by the single header suppression protocol disclosed in Chapman, the DOCSIS Header Suppression. *See* Chapman, column 6, lines 14-20.

Thus, it cannot be said that Chapman teaches or suggests a MAC in a cable modem that is adapted to format data for transmission to a CMTS in accordance with either “a selected one of [a] plurality of protocol-specific header suppression techniques” or “a default header suppression technique” depending on a response to a registration message received from the CMTS as recited by independent claim 1.

On page 5 of the present Office Action, the Examiner, in contradiction to the Response to Applicants' arguments, now states Chapman fails to disclose a cable modem that is adapted to format data for transmission to a CMTS in accordance with "a selected one of [a] plurality of protocol-specific header suppression techniques." The Examiner further states although Chapman does not disclose the above recited features of claim 1, Fijolek discloses that "the cable modem formats data according to a selected one of the protocols for the desired service (A service session profile is created wherein the cable modem communicates with the CMTS in accordance with the service identifiers of the desired service – col. 33, lines 39-57, col. 36, line 62 – col. 37, lines 20)." *See* Office Action at page 6. Applicants respectfully disagree.

As discussed in the Reply filed November 27, 2006, Fijolek describes a method and system for dynamic service registration, activation and deactivation on a data-over-cable system. Fijolek discusses the transmission of registration messages by a cable modem to a CMTS to establish a service session for a service device associated with the cable modem. The registration message includes multiple service parameters such as Quality-of-Service ("QoS"), Class-of-Service ("CoS"), Type-of-Service ("ToS"), voice service parameters, or other service session parameters. In response to receiving the registration message, the CMTS creates a service session profile for the desired service and associates the profile with a deferred inactive service identifier for the cable modem, which is used to activate the desired service at a later time. The deferred inactive service identifier is then returned to the cable modem in a registration response message.

Contrary to the assertions of the Examiner, the foregoing teachings of Fijolek have nothing to do with header suppression. Rather, these teachings merely relate to the

dynamic registration of a service session on a data-over-cable system. In fact, Fijolek is completely silent with respect to header suppression. The Examiner wrongly equates the creation of a service session profile that includes multiple service parameters (e.g., Quality-of-Service ("QoS"), Class-of-Service ("CoS"), Type-of-Service ("ToS"), or voice service parameters) described in Fijolek, with data being formatted for transmission to a CMTS in accordance with "a selected one of [a] plurality of protocol-specific header suppression techniques," as recited in claim 1 of the present Application. Service parameters, as disclosed in Fijolek, are required by a desired service (e.g., Voice over Internet Protocol) to establish and maintain service registrations. *See* Fijolek, column 4, lines 12-18. In complete dissimilarity, protocol-specific header suppression techniques, as recited in claim 1, are utilized to greatly reduce the size of payload headers within a given packet. *See* Specification, paragraph 0017. Subsequently, the service parameters discussed in Fijolek are completely different and of no relevance to the protocol-specific header suppression techniques of the present Application. If this rejection is maintained, Applicants respectfully request that the Examiner clearly and distinctly point out the relation of service parameters discussed in Fijolek to header suppression techniques claimed in the present Application.

Consequently, it also cannot be said that Fijolek, or Chapman in combination with Fijolek, teaches or suggests a MAC in a cable modem that is adapted to format data for transmission to a CMTS in accordance with either "a selected one of [a] plurality of protocol-specific header suppression techniques" or "a default header suppression technique" depending on a response to a registration message received from the CMTS as recited by independent claim 1.

Independent claim 1 further recites, among other features, a “media access control [that] is adapted to generate a registration message that indicates support for a plurality of protocol-specific header suppression techniques by the cable modem and wherein said transmitter portion is adapted to transmit said registration message to a cable modem termination system.”

The Examiner concedes neither Chapman nor Fijolek, alone or in combination, teaches or suggests the above recited feature of claim 1. However, the Examiner claims based on the teachings of Chapman and Fijolek the above recited features of claim 1 are allegedly well known in the art.

Applicants disagree with the Examiner’s description of the above recited features of claim 1 as sending “a list of a plurality of [*sic*] header suppression protocols supported by a device to another device when establishing communication for the advantage of using the protocol which is desirable for the current situation.” Applicants refer the Examiner to pages 4-5 and 22 of the specification for specific advantages for generating “a registration message that indicates support for a plurality of protocol-specific header suppression techniques by [a] cable modem,” as recited in claim 1. This feature allows, among other things, the interoperability of conventional CMTS and cable modem devices with cable modem system components that use proprietary protocol-specific header suppression techniques. The conventional CMTS and cable modem devices are designed in accordance with the DOCSIS specification and do not support the use of proprietary protocol-specific header suppression techniques. In other words, interoperability provides for integration of a cable modem system that supports a plurality of header suppression techniques on the same network with components that do

not. The registration message is used to negotiate a common set of supported suppression protocols between a cable modem and a CMTS.

For at least the reasons provided above, Applicants submit that the above noted features of claim 1 are not well known in the art, as alleged by the Examiner. Accordingly, Applicants request that the Examiner provide evidentiary support for his allegation that "it is notoriously well known in the art to send a list of a plurality of header suppression protocols supported by a device to another device when establishing communication for the advantage of using the protocol which is desirable for the current situation." (Office Action, p. 11.) Similarly, Applicants request that the Examiner provide evidentiary support for his allegation that "it is notoriously well known in the art to use a header suppression protocol (ex. RTP Encoding, Dynamic Delta Encoding, DOCSIS PHS) instead of a protocol which does not use header suppression for the advantage of suppressing bandwidth." *Id.* M.P.E.P. § 2144.03(c).

However, even if the examiner is able to find evidentiary support, the Examiner's allegations of what is "notoriously well known" do not address the specific advantages described in Applicants' specification with respect to the features of claim 1 recited above. Consequently, any evidentiary support found for such "well known" features would be immaterial.

Since the combination of Chapman and Fijolek does not teach or suggest each and every feature of independent claim 1, that combination cannot render independent claim 1 obvious. Dependent claims 4 and 5 are likewise not rendered obvious by the combination of Chapman and Fijolek for the same reasons as independent claim 1 from which they depend and further in view of their own respective features. Accordingly,

Applicants respectfully request that the rejection of claims 1, 4 and 5 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Independent claim 6 is directed to a cable modem termination system (CMTS) that includes, among other features, a media access control (MAC) that is adapted to process data transmitted by a cable modem in accordance with either "a selected one of [a] plurality of protocol-specific header suppression techniques" or a "default header suppression technique" depending on a protocol indicator. As discussed above with respect to independent claim 1, neither Chapman nor Fijolek teach or suggest a cable modem system that supports header suppression in accordance with either "a selected one of [a] plurality of protocol-specific header suppression techniques" or a "default header suppression technique" as claimed. Consequently, the combination of Chapman and Fijolek cannot render independent claim 6 obvious. Also, for the same reasons as provided above with respect to claim 1, Applicants disagree with the Examiner's unsupported assertion that the above recited features of claim 6 are well known in the art. Dependent claims 9, 10, 12 and 13 are likewise not rendered obvious by the combination of Chapman and Fijolek for the same reasons as independent claim 6 from which they depend and further in view of their own respective features. Accordingly, Applicants respectfully request that the rejection of claims 6, 9, 10, 12 and 13 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Independent claim 14 is directed to a method for transferring data between a cable modem and a cable modem termination system (CMTS) in a cable modem system that includes, among other features, formatting data for transmission to the CMTS in accordance with either "a selected one of [a] plurality of protocol-specific header

suppression techniques" or "a default header suppression technique" depending on a response to a registration message received from the CMTS. As discussed above with respect to independent claim 1, neither Chapman nor Fijolek teach or suggest this feature. Consequently, the combination of Chapman and Fijolek cannot render independent claim 14 obvious. Also, for the same reasons as provided above with respect to claim 1, Applicants disagree with the Examiner's unsupported assertion that the above recited features of claim 14 are well known in the art. Dependent claims 17-20 are likewise not rendered obvious by the combination of Chapman and Fijolek for the same reasons as independent claim 14 from which they depend and further in view of their own respective features. Accordingly, Applicants respectfully request that the rejection of claims 14 and 17-20 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Independent claim 21 is directed to a method for data transfer in a cable modem system including a cable modem termination system (CMTS) and a cable modem that includes, among other features, processing data transmitted by the cable modem in accordance with either "a selected one of [a] plurality of protocol-specific header suppression techniques" or a "default header suppression technique" depending on a protocol indicator. As discussed above with respect to independent claim 1, neither Chapman nor Fijolek teach or suggest a cable modem system that supports header suppression in accordance with either "a selected one of [a] plurality of protocol-specific header suppression techniques" or a "default header suppression technique" as claimed. Consequently, the combination of Chapman and Fijolek cannot render independent claim 21 obvious. Dependent claims 24-27 are likewise not rendered obvious by the

combination of Chapman and Fijolek for the same reasons as independent claim 21 from which they depend and further in view of their own respective features. Accordingly, Applicants respectfully request that the rejection of claims 21 and 24-27 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Claims 2, 7, 15 and 22

The Examiner has rejected claims 2, 7, 15 and 22 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Chapman and Fijolek as applied to independent claims 1, 6, 14 and 21 and further in view of U.S. Patent No. 6,788,707 to Horton, Jr. *et al.* ("Horton"). Horton in no way remedies the deficiencies of Chapman and Fijolek with respect to independent claims 1, 6, 14 and 21 as described above. Consequently, the combination of Chapman, Fijolek and Horton does not render claims 1, 6, 14 or 21 obvious. Dependent claims 2, 7, 15 and 22 are likewise not rendered obvious by the combination of Chapman, Fijolek and Horton for the same reasons as independent claims 1, 6, 14 and 21 from which they respectively depend and further in view of their own respective features. Accordingly, Applicants respectfully request that the rejection of claims 2, 7, 15 and 22 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Claim 11

The Examiner has rejected claim 11 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Chapman and Fijolek as applied to independent claim 6 and further in view of U.S. Patent No. 6,765,925 to Sawyer *et al.* ("Sawyer"). Sawyer in no way remedies the deficiencies of Chapman and Fijolek with respect to independent claim 6 as described above. Consequently, the combination of Chapman, Fijolek and Sawyer does not render claim 6 obvious. Dependent claim 11 is likewise not rendered obvious by the

combination of Chapman, Fijolek and Horton for the same reasons as independent claim 6 from which it depends and further in view of its own features. Accordingly, Applicants respectfully request that the rejection of claim 11 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

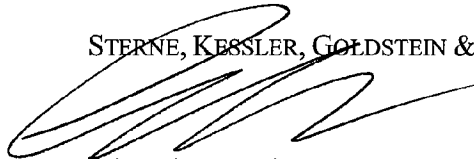
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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